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ABSTRACT

The strategy of expanding the modern industrialized economic sector and the formal education system that developing countries have followed during the past twenty years has recently been questioned. In these countries, the informal economic sector is dominant and includes many more people in small business, crafts, and services. An innovative approach to informal education, education derived on the job without formal training, may be needed for the people involved in this sector. The informal sector is characterized by the smallness of the work unit and consists of workers who can be classified into four groups: entrepreneurs, establishment workers, independent workers, and casual workers. The former two groups are often somewhat educated and can benefit from formal or nonformal education, while the latter groups are often too illiterate or constrained by poverty or lack of time to make use of these educational means. For these groups, a variety of approaches to informal education may help. For instance, since most workers receive training through apprenticeships, improving the skills of the master could result in improving the education and skills of the worker. Another approach is to make technical assistance directly available to the employing establishment, e.g., sending a mobile unit. Other ways of providing training opportunity to workers in the informal sector include Vocational Improvement Centers and day release programs. Although these training approaches do not overcome all the problems associated with training in the informal sector, they are promising practices linked to needs. (KC)

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VOCATIONAL AND TECHNICAL TRAINING IN LESS DEVELOPED COUNTRIES: THE INFORMAL ECONOMIC SECTOR

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VOCATIONAL AND TECHNICAL TRAINING IN LESS DEVELOPED COUNTRIES: THE INFORMAL ECONOMIC SECTOR

For the past two decades, developing countries largely followed a strategy of expanding the modern, industrialized economic sector. Appropriate education programs were designed to address the need for highly skilled manpower. This strategy, however, is being increasingly called into question. Stagnant economies; high rates of unemployment, especially "educated unemployment," and underemployment; dissatisfaction with the quality of life; and the inability to extend the most basic benefits to large numbers of ill-fed, ill-clad, ill-housed and illiterate citizens have raised serious questions about past development policy. One result has been considerable recent attention focused on the informal economic sector.

This paper briefly examines vocational and technical training in the informal economic sector, focusing on characteristics of this sector, training needs, and constraints encountered. The findings are largely tentative, a suggestion of areas meriting further inquiry.

Informal Education Defined

For the past decade the term "informal education" has been used to distinguish learning that is acquired on the job or at home from formal and nonformal education. To be sure, nonformal education takes place outside of the formal system, but it is nevertheless an organized system of training in contrast to informal education, which is unorganized (Coombs, Prosser, and Ahmed, 1973: 10-12; Blaug, 1979: 396). Ahmed (1975: 10) defines informal education as "the life-long process of acquiring incidental attitudes, values, skills, and knowledge from one's environment."

In the less developed and rural sectors of the economy, and particularly in traditional societies, the greatest part of occupational training is acquired through informal means. Blaug (1979: 396), for one, suggests "that the vast majority of the labor force throughout the Third World learn the skills they need for their livelihood not in the systems of formal and nonformal education, but informally...." In Kenya, for example, roughly 226,000 students complete primary school each year, yet formal skills training is available for only about 5,000 students. The majority of those who leave primary school eventually enter the labor market in one capacity or another, but their skills are largely learned through indigenous training opportunities. Similarly, Allen (1982) observes that the informal "apprenticeship" is, for all practical purposes, a universal component of the West African labor market, comprising a vast training "system" through which critical economic and development needs are addressed.

It is not inaccurate to think of informal education as primarily responding to the skill needs of the informal sector of the economy. Informal training feeds the skill needs of this sector, and supplies in part its dynamic character. Informal training is tied to local labor force needs, promoting skill development related to local resources and production; training and advancement are based on production and achievement rather than on certification; production incorporates labor-intensive and simple, adaptive technology; and, entry into the labor force is relatively easy, with a prevalence of small scale, low capital investment operations and self-employed enterprises (World Bank, 1980; Sethuraman, 1981). The urban informal sector may comprise between 20 to 70 percent of the labor force in less developed countries. "It would seem unwise," Papola (1981: 2) cautions, "to disregard such a sizeable segment of these econo[illegible] in any strategy of development."

Characteristics of the Informal Economic Sector

The single common characteristic of the informal sector is the "smallness" of the work unit, often consisting of only one individual, with, perhaps, a couple of helpers. Sethuraman (1976) suggests that firms consisting of 10 workers constitute the upper limits of informal enterprises. The informal sector, however, is actually made up of a number of subsectors, each of which has different policy planning implications for vocational education. Within this range can be found entrepreneurs, those who own the means of production or commerce, individually or in partnership; establishment workers; independent workers; and casual workers (Papola, 1981).

Entrepreneurs tend to be the highest educated group in the informal sector, many having substantial formal education, most are able to read and write. In small establishments, the owners are workers, and when others are employed, they may be family members or relatives. Most buy raw material locally, manage their own finances, and sell locally to different buyers. The major constraints faced are the lack of capital, dependence on what may be limited demand for goods and services, and inaccessable credit. In addition, few informal enterprises are covered by government regulations or benefits.

The lack of managerial and marketing skills, along with low or outmoded technical skills, are perhaps the two greatest educational problems faced. These are followed by the need to locate information on better technology and production processes (Papola, 1981; Sethuraman, 1981). Instruction, however, must be fully adapted to the requirements of the very small businessman, and conveyed through means that can be fully taken advantage of by entrepreneurs who have limited resources and even less discretionary time available. This group does have, in general, a level of education that suggests that they can benefit from formal and nonformal programs of education.

Establishment workers, those employed by entrepreneurs, comprise a substantial group of workers in the informal sector. Basically wage earning employees or relatives, they make up the three or four additional workers on the average that the owner-worker requires to meet market demand. Generally, establishment workers are employed regularly on a full-time basis, have relatively high skill levels, and may have as much as eight years of formal schooling. Papola (1981): 44) finds that the preponderance of establishment workers are in white collar or skilled jobs: vending of goods, repair work, skilled manufacturing, clerks, bookkeepers, office attendants, salesmen and bookbinders, to name some. The majority of establishment workers learn their skills on the job, basically through apprenticeship. This is true even when secondary school is completed, and in the case of vocational and technical school graduates, a high proportion still undergo training on the job. Of those who did not complete primary school, Fowler (1981: 55) found that "95 percent of them underwent apprenticeship... One implication of this trend is the possibility that such extramural training could, if properly organized, prove more than a substitute for incomplete primary education."

The ability to make time for training remains a problem with establishment workers as with most workers in the informal sector. On the other hand, with the exception of introducing new technology and mangerial skills, apprenticeship and informal on-the-job training appears to provide substantial skill training, addressing many skill needs. Moreover, for purposes of adapting technology to simple production and accommodating labor intensive activity, indigenous apprenticeship training may be adequate. Technical training probably needs to complement, rather than replace, indigenous work techniques.

Another, and often large, category of workers in the informal sector are independent workers. These are individuals who are basically self-

employed. Most work singlehandedly, only a few hire others, and when they do, often this is a family member. Most own their tools and equipment. While they may work for wages, they are nevertheless "independent." Auto-rickshaw drivers; street vendors and hawkers; bicycle, clock, watch and shoe repairmen; producers of earthenware and leather products; and laundrymen and sweetcake bakers are but a few of the multitude of individuals who perform daily tasks in the streets and alleys of large urban areas and along the village roads and in the town squares of rural communities. They provide simple, but essential, services, independent but yet restricted by the generally low market value of their product or service. Papola (1981: 54) observes that "independent workers constitute the smallest units in the category of establishments and are the simplest forms of production units in the informal sector."

This group has characteristics which make it difficult to directly provide training services. Independent workers are generally unorganized, a nebulous group difficult to count, keep track of or maintain organized contact. While many work from fixed locations, it may still be difficult to provide educational services through any organized scheme. Informal workers have few resources or little time that they can give to training, and their hours may be irregular and based on market demands. Most are earning wages about 50 percent less than those obtained in the organized sector of the economy.

Better tools and equipment and more technologically advanced ways of working are desirable, but low-paid, labor-intensive work is a competitive advantage in low-demand markets. The independent worker can compete, in part, because of the low price of his physical labor, which is less costly than machinery or equipment. Finally, independent workers generally have lower educational levels than entrepreneurs or establishment workers in the informal economy or similar workers in the formal sector. Slightly more

than half are literate. Restrictions on initial educational attainment further constrain the potential for retraining and upgrading. Papola (1981: 87-88) also found that a sizeable proportion of independent workers originally started out in establishments, but are "rejects (retrenched)." Reasons for this retrenchment are probably key to the design of any training activity.

Casual workers are the most disadvantaged group in the informal sector. While casual workers earn income in the form of wages, their jobs rely heavily on manual labor, little training is often needed, and earnings are usually low. Household workers make up the largest group of casual workers, with gardeners, cleaners and sweepers accounting for another considerable group, and mechanics, construction workers, watchmen, and spinners and weavers constituting other typical casual jobs. Casual workers are the least educated group in the informal sector, with large numbers illiterate and few completing more than two or three years of school. Work skills can usually be learned incidentally on the job. This fact, along with low pay and the fact that casual employment generally leads nowhere, suggests that if training is made available to casual workers, it should be directed to more skilled jobs that provide greater social and private return.

Using a different classification system, the World Bank (1980: 48-49) identifies the following three subsectors: 1) craft, 2) workshop, and 3) commercial and services. In the craft subsector, production units are usually small, with work completed in home workshops by the self-employed individual, including a high proportion of women. Skills are basically learned on the job by an older worker teaching the novice over a relatively long period of time; manipulative skills usually take an extended period of time to learn well. The greatest educational need of the craft subsector appears to be acquiring marketing and accounting

skills. Enterprises that produce quality products are limited by their inability to expand their markets. In rural areas, it may be particularly beneficial to facilitate the establishment of marketing cooperatives.

The workshop subsector produces a variety of products in addition to service and repair activities. A considerable proportion of production may directly feed the modern sector through intermediate products. Papola (1981: 65) observes that "the only segment of the informal sector that can be expected to contribute significantly to the income and employment growth is that of manufacturing units." Rather large proportional amounts of income are generated in the workshop sector, increased output generates considerably more employment than other activities, and growth in this sector is more "autonomous" than in trade and commercial activities. Further, Papola (1981: 124) emphasizes, there is

> Some evidence to show that the major contribution to the urban economy and its growth has been made by units which are small but have technological and market characteristics of the formal sector units. Small manufacturing units are found to be the key segments of the "informal" sector in this context, but in terms of technology, productivity and marketing characteristics they compare reasonably well with the units in the formal sector. In fact, most of them are technologically and marketwise integrated with and grow and prosper on the basis of their relationship with the units in the organized sector.

Sethuraman, however, (1981: 197) observes that "a major part of the employment growth in the informal sector seems to be not in older enterprises hiring more labor, but in the growth of the number of small, i.e., single person enterprises."

In the majority of workshop enterprises, simple and adapted technology is used with heavy reliance on labor-intensive production. While skills are basically learned on the job, it does appear that greater use is being made of institutionalized training programs, formal and nonformal, to provide basic skill training for younger participants

(World Bank, 1980: 49; Sethuraman, 1981). On the other hand, this may indicate the saturation of the formal labor market so that the young are seeking employment in the only place that they can find work--the informal sector (Gregory, 1980).

Any training scheme to address the workshop sector should probably be structured around on-the-job activities, should coordinate learning with existing production processes, and at the same time introduce technologies and production processes that have a reasonable chance of being absorbed into the informal work mode. Trainers, the World Bank (1980: 49) suggests, "should be recruited from among the best local workers; and the community should be responsible for organizing and running these training programs."

The commercial and services subsector is usually large in LDCs, and it is often integrated both with other informal sector activity and formal sector enterprise. The largest percent of entrepreneurs and establishment workers are employed in this subsector, and, obviously, jobs tend to be white collar (Gregory, 1980). The World Bank (1980: 99) observes that "for the literate rural dweller, the transition from daily marketing to the permanent status of an urban trader is the first step into the wider field of commerce and services." The overall growth rate of this sector and its ability to absorb labor, however, is limited since "trade and commerce activities have an induced rather than autonomous growth and, therefore, cannot be made to grow faster than warranted by the growth of other sectors," Papola (1981: 65) observes, "and even if they grow fast, their employment potential seems very low." Fewer workers are added for a given increase in output than in other economic activity. As previously suggested, the lack of capital and restricted credit remain major obstacles to the extension of activities. Training needs generally are in marketing, management and investment skills.

The existence of the informal economic sector in LDCs has been recognized for some time. It is also a debated issue. The informal sector is characterized by its "smallness," lack of capital and available credit, and by the fact that it is the "unprotected" sector of the economy (Mazumdar, 1975; Sethuraman, 1976; Weeks, 1975). These characteristics, however, may merely place the informal sector at the lower, and less advantaged end of a continuum of economic activity. This question is important, because it directly relates to the formulation of policy: should the informal sector be treated separately from other economic and educational activity, or should development policy be thought of in the broader context, encompassing all economic activity? Sethuraman (1981: 201), for one, suggests that while the informal sector is considered a subsector of the economy, "it does not follow that the policies and measures proposed to develop this sector can be independent of the economic system in which the informal sector coexists with its formal counterpart." Papola (1981), Allen (1982), Jurado (1981) and McLaughlin (1979) make similar arguments. The two sectors are linked in many ways, and those activities in the informal sector which show the most vitality and promise for growth are the ones which apparently are most closely linked to the formal sector.

Training in the Informal Sector

There are also important links between formal and nonformal education and the informal economic sector. Probably to a greater extent than realized, formal and nonformal education directly impact on the occupational success and mobility of individuals within the informal economic sector. For one thing, evidence suggests that those with basic literacy and numerary skills fare better in the informal sector than those who lack these basic skills. Moreover, the lack of functional skills often prevents the individual from taking advantage of the training opportunities that

are available locally (Phillips, 1978), and may constitute the single most tenacious barrier to occupational progress. Access to additional skill training appears highly important to occupational mobility in the informal sector (Moir, 1981; Sethuraman, 1981; McLaughlin, 1979).

While relatively few individuals may have the opportunity to gain formal or nonformal skill training, the interface with informal employment appears, nevertheless, highly important. As McLaughlin (1979: 37) observes, "technical practice in the informal sector continues to be influenced prodoundly by the diffusion of skills and technology from the formal sector." To a large extent, it is from organized programs that skills are learned which, in turn, eventually find their way into the skill repertoire of informal workers.

The establishment of effective educational policy, however, is less certain, particularly regarding the interface of organized training with informal skill needs. Blaug (1979: 397), for example, cautions that "at present, the best thing that could happen to informal education is that it be left alone, not the least because it appears to achieve a wide range of educational objectives more successfully than the formal system." One of the strengths of informal training is its unstructured and improvised character which makes it flexible and adaptable to immediate employer needs. Hunter (1973: 282) suggests that "since informal education is more specifically related to real needs and to locally felt demands, it may well be one of the most flexible and efficient forms of education there is...." "Formalizing" informal education may eliminate the flexibility so highly valued while at the same time redirecting the purpose of training. Anderson (1973) observed in Kenya that intervention tended to take on the characteristics of formal education: participates expect to receive certificates, sit formal examinations, and eventually move into formal, wage earning employment.

A more immediate and practical problem, however, is to provide training that is accessible to informal workers and that directly addresses their skill needs. Training may be inaccessible simply because of basic educational requirements. As suggested, workers in the informal sector can be characterized by low levels of formal education and limited literacy and numerary skills. At the same time, even the simplest training makes use of basic mathematical and communication skills. Those that are the least occupationally skilled and lack the most basic education may be excluded de facto from training simply because they cannot meet even the least demanding requirements for successful participation (Phillips, 1978).

Training may also be inaccessible because it cannot be afforded. Even token registration fees, when combined with transportation cost and expenses for instructional supplies can constitute costs that are a real barrier to informal workers, consisting of perhaps as much as 50 percent of an individual's monthly income. In addition, the trainee from the informal sector is faced with high indirect (opportunity) costs. Work hours are usually long, often spent in piece work, so that any time lost through training constitutes a real loss in earned income. And it is highly unlikely that the employer will provide time off to pursue training. While the employer in the modern sector is likely to view additional training as a net gain because of a better qualified worker, the small employer will probably be threatened: there is little guarantee that newly acquired skills will not result in demands for higher wages, the loss of the worker to a competitor, or the establishment of an independent business by the former employee (ILO, 1977: 223-224).

Lacking the most rudimentary educational skills and faced with real economic and time constraints, informal sector employees may not enroll in organized training programs. The ILO (1977), for example, found that in Chile, programs tended to have a high concentration of more prosperous

workers; poorer candidates simply did not apply. Similarly, courses may tend to offer instruction that is suited to modern sector employment because this is what those who design the program are most familiar with. In rural areas, in particular, the mismatch between organized skill training and indigenous production techniques may be marked. Following are a number of training approaches that are potentially effective for the informal economic sector.

Training Approaches

It is not surprising that indigenous apprenticeship constitutes the major way that the young enter the informal employment sector. Few initial skills and little experience is needed. The potential apprentice merely has to locate a willing master, often a relative; pay the fees usually associated with training; and be willing to undergo an extended period of training with, typically, no pay. Apprenticeship in the informal sector differs from that in the nonformal in that it may be largely craft-based, focused on skills that are labor-intensive or that involve simple and adapted technology, or the range of skills learned may be limited (Allen, 1982; McLaughlin, 1979). Battery charging, shoe repairing, bed construction, weaving and pottery making are a few of the host of jobs the young learn by attaching themselves to the established "master." At the start, Allen (1982: 128) observes, they act "as little more than errand boys or menial labor: going to the market, taking care of the shop, sweeping the floors, and being generally available." In time, the apprentice will pick up skills by observing, be given simple tasks to perform, and eventually be expected to complete complex tasks, returning value to the master in the form of labor. If time permits, some formal instruction will be given, but basically the apprentice learns by observing

and doing. The quality of training is only as good as the skills of the master and his willingness to teach the apprentice all that he knows. Apprenticeship is a "relationship of exploitation," Allen (1982: 127) cautions, "in which the component of 'cheap labor'--as opposed to 'ex ellent training' can come to dominate."

McLaughlin (1979: 222) suggests that informal apprenticeship systems can be directly improved by providing more opportunity for technical upgrading. He observes, for example, that "those artisans who had received specific trade training in an institution were more productive (i.e., had a higher output) and had higher earnings than artisans with only the usual apprenticeship training." One approach is to make technical assistance directly available to the employing establishment. This is an idea based on the agricultural extension model in which assistance is provided to individual farmers at the workplace. In an example reported by McLaughlin (1979: 224-225), a truck was equipped with a complete mobile workshop used as an instructional center. Through a schedule of regular visits, team members assisted small-scale mechanics who had particularly difficult repair problems. Instruction was informal and focused on the problem at hand. Phillips (1978: 20) suggests that the extension model be applied to technical assistance for family businesses and small enterprises in the informal sector.

Other ways of providing training opportunity to workers in the informal sector include Vocational Improvement Centers (VIC) and "day release" programs. Coombs and Ahmed (1974: 53-55) report on VICs established in six northern Nigerian states to assist small-scale industry and independent artisans and craftsmen. There are no minimum entry requirements and no fees; instruction runs four or five days per week for roughly 400 hours, starting after the working day. At the end of

the program, participants are eligible to take the Grade III (lowest) level trade test or to continue on for Grade II and I level training.

The VIC program uses existing facilities, such as primary school classrooms or the shops of local vocational schools. There are no permanent staff excepting for the program coordinator; instructors are hired from local industry or vocational schools. The opportunity cost to individuals is low. The main outcome of the program is that it "may be credited with opening up training and modern sector employment opportunities for rural semi-skilled workers with little or no formal education" (Coombs and Ahmed, 1974: 55).

The day release approach is a combination of regular on-the-job apprenticeship training and classroom instruction. Trainees spend two days a week at a vocational center and the remaining days at work. The program in Kumasi, Ghana (McLaughlin, 1979: 229-233) for example, is organized into three phases. The first phase lasts about three months, at which time the apprentice returns full-time to work. The second phase, about nine months later is also for three months, followed by the third phase of three months of training in the last year of apprenticeship. Formal instruction is roughly divided into 75 percent pratical and 25 percent theoretical work, with each instructional phase more intensive than the preceding one. At the completion of training, the participant is eligible to take a trade examination.

Key to the program is collaboration with the local vocational center: staff and facilities are used. Members of the local Artisan's Cooperative Society also fully participate in instructional planning, helping to realize the "goal of delivering specially tailored supplemental training to an occupational group previously ignored by the educational establishment" (McLaughlin, 1979: 231).

Individually, these training approaches do not overcome all of the problems associated with training in the informal sector. Collectively, however, they do point to promising practices, ways to link more closely to indigenous needs.

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